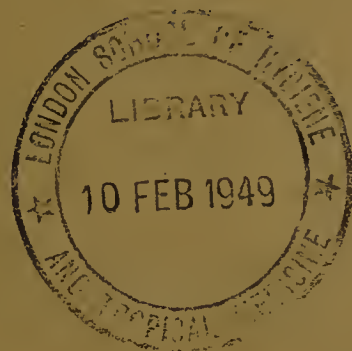


PAPWORTH

1933



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The Papworth Village Settlement

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REPORTS

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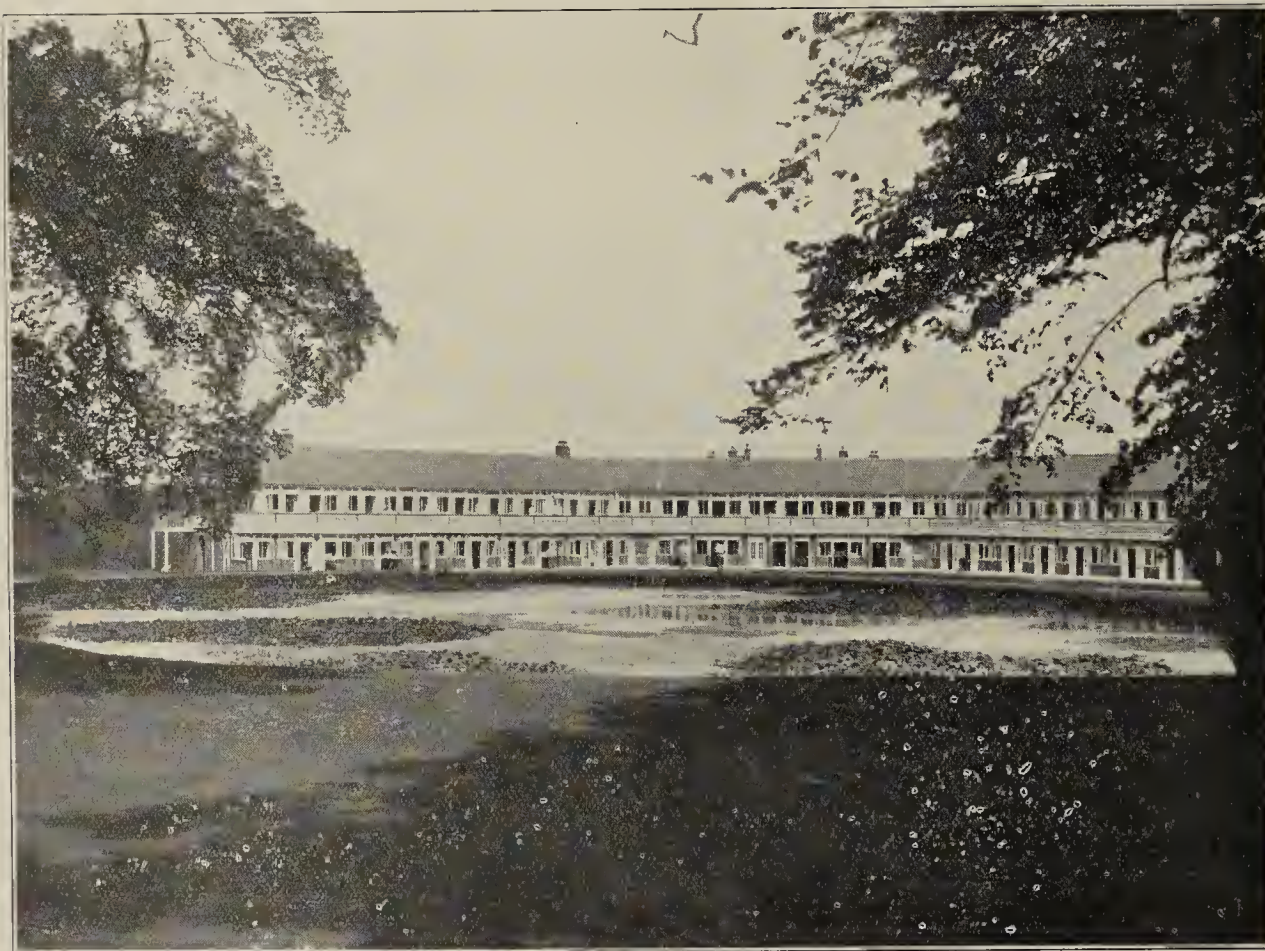
COMMITTEE of MANAGEMENT

and

MEDICAL DIRECTOR

for 1932

*Presented at the Sixteenth Annual General
Meeting of the Settlement, July 6th, 1933*



THE NEW HOSPITAL FOR WOMEN

Papworth Village Settlement.

Patrons:

Their Majesties the KING and QUEEN.
HER ROYAL HIGHNESS The PRINCESS ROYAL.
The Right Hon. The EARL OF HAREWOOD, K.G.

President:

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Field-Marshal The Right Hon. The VISCOUNT ALLENBY, G.C.B., etc.
Her Grace The DUCHESS of ATHOLL, M.P.
Admiral of the Fleet The Right Hon. The EARL BEATTY, O.M., etc.

The Right Hon. The VISCOUNT BURNHAM, G.C.M.G., C.H.
The Hon. Lady DARWIN.
The Lady GUERNSEY.
The Most Hon. The MARQUESS of LINLITHGOW
The MARCHIONESS of LINLITHGOW.

His Grace The DUKE of PORTLAND, K.G.
Her Grace The DUCHESS of PORTLAND.
The Right Hon. The Lord QUEENBOROUGH.
Her Grace SUSAN, DUCHESS of SOMERSET.
The MARCHIONESS of TITCHFIELD.
R. S. WHIPPLE, Esq.

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Hon. Secretary: Mrs. G. F. C. GORDON.

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Medical Director: Sir PENDRILL VARRIER-JONES, M.A., (Camb), M.R.C.P. (Lond.).

Resident Medical Officer: L. B. STOTT, M.C., M.B., Ch.B., D.P.H.

Matron: Miss K. L. BORNE

Dental Surgeon: W. BAIRD GRANDISON, L.D.S., R.C.S., Ed.

Postal Address: Papworth Hall, Cambridge. *Telephone:* Caxton 18 & 19.
Stations: St. Ives, Hunts., L.N.E.R. (5 miles). Huntingdon, L.N.E.R. (5 miles). Cambridge, L.N.E.R. (12 miles)



ST. JOHN'S HOSTEL FOR MEN

REPORT OF THE COMMITTEE OF MANAGEMENT FOR 1932



The year 1932, like its predecessors, has been full of incident for Papworth.

It will be especially remembered because on July 8th the Settlement had the privilege and pleasure of again welcoming their Royal Highnesses the Duke and Duchess of York.

On this occasion the Duchess formally opened the New Hospital for Women, a splendid building containing 62 beds, designed by Mr. McMahon of Papworth Industries, in consultation with our Honorary Architect, Mr. H. H. Dunn, F.R.I.B.A., and built and equipped throughout by Papworth Industries. The Duchess also presided at the opening of the West Cambridgeshire Flower Show in the grounds of Papworth Hall, and graciously distributed the prizes. Their Royal Highnesses received, as on each of their previous visits, a most enthusiastic welcome, and it is the hope of all that their next visit to Papworth may not be long delayed.

April 28th was also an important date in the annals of Papworth as on this occasion two of the Trustees under

the will of the late Mr. Bernhard Baron visited the Settlement, and were so much impressed with the aims and needs of Papworth, that after consultation with their colleagues the munificent benefaction of £20,000 was approved to be paid in five annual sums and the first instalment was received on 13th May. As a result of this generous gift plans were immediately put in hand for the "Bernhard Baron Memorial Hospital," which will provide accommodation for about 84 male patients, and will also contain an up-to-date Out-Patient Department for the use of the whole village. This Hospital, which is designed on similar lines to the one recently built for women, is being built and equipped entirely by Papworth Industries. Two further gifts towards this building must be recorded—one a valuable contribution of £2,500 from the British Red Cross Society, and the other a first instalment of £500 of Mr. Warwick Deeping's generous gift to Papworth of a share of the royalties on "SMITH," the novel which is daily bringing the



THE SIMS WOODHEAD MEMORIAL LABORATORY

work of Papworth to the notice of thousands of people.

On the 28th October Lady Baron laid the Foundation Stone of the Bernhard Baron Hospital in the presence of the Minister of Health (Sir E. Hilton Young) and a number of friends of Papworth including Mr. & Mrs. Warwick Deeping.

On the 5th July Her Majesty the Queen graciously attended the "French Picture Matinee" at His Majesty's Theatre organised by the Marchioness of Linlithgow and Mrs. Frank Braham. The event was a great social and financial success; and the proceeds which were shared equally by Papworth and the Princess Beatrice Hospital, resulted in the payment of more than £1,000 to the funds of the Settlement.

Early in September Papworth received a large number of tributes from foreign tuberculosis experts at the Conference of the "Union Internationale contre la Tuberculose" held in Holland. The Conference was attended by Sir Pendrill Varrier-Jones and Mr. Reynell Wreford, and the many appreciative references to Papworth received noteworthy recognition in the British Press. Sir Pendrill was appointed President of a new International Body formed for the special and intensive

study of after-care in tuberculosis, and this Body has now been duly affiliated to the Union Internationale.

On September 28th, a new building, original in its aims, was opened by Mrs. Keynes, the Chairman of the Committee. It is a home for Papworth Nurses, who, by reason of advancing years or infirmity, are unable to continue to do full time work. At the time Papworth was founded many of the nurses available were (owing to the exigencies of war) nearing middle age and they are now feeling the strain of years of arduous work. For a long time the Matron, Miss K. L. Borne had realised that some provision should be made to ensure that a comfortable home would be available for these devoted women who had given of their best for the cause of humanity. The Matron's scheme was received with enthusiasm. Not only did patients and ex-patients of Papworth give gladly to the cause, but so much outside help was forthcoming that within a comparatively short time Papworth Industries had built and equipped "Borne House,"—a delightful and cosy retreat.

Another outstanding event of the year was the Broadcast Appeal by the Rt. Hon. Stanley Baldwin. On Sunday



THE SIGNWRITING AND POSTER DEPT.

the 13th November, Mr. Baldwin delivered a broadcast appeal for Papworth with all the eloquence for which he is famous. Rich and poor alike hastened to respond, and the gifts ranged in value from 2½d. to £1,000. All were inspired by the same spirit of unselfishness. They came from all parts of Great Britain and Ireland; from Belgium, Holland, Newfoundland, Norway, Portugal and Switzerland; from old age pensioners and poor widows; from the unemployed—and from the blind. Rarely indeed can there have been such a demonstration of respect for a speaker and goodwill to a cause. Between the 14th of November and 31st of December no less a sum than £13,206 4s. 4d. was received as a result of the broadcast, and further donations have come in this year—a truly marvellous response. A reprint of the broadcast has been prepared and a copy will be sent to any who may wish to have it. Not only has this windfall enabled the Committee to carry on the various activities of the Settlement, but it has provided capital sums for much needed extension to workshops, and the installation of new and up-to-date machinery which will

do much to improve the conditions under which the men work, and reduce the physical effort which their work entails.

The Committee regret having to report the deaths, early in 1933, of two of the most valued members of the surgical staff. Sir Robert Jones, the eminent orthopædic surgeon, was one of Papworth's most valued supporters; and Mr. Arthur Cooke, the senior surgeon on the staff of Addenbrooke's Hospital, Cambridge, had long been connected with Papworth and was always a welcome visitor to the Settlement. We have also to announce with regret the loss of Major-General H. Hendley, an active member of the Committee and an untiring worker for Papworth.

The Chaplaincy arrangements have continued to work well. Papworth accepts as patients tubercular persons of every creed, and all facilities are given for those in the Hospitals and Settlement to be visited by clergy of their own faith.

Mention must again be made of the extraordinarily valuable work of the Papworth Hospital Guild which has continued, under the guidance of Lady



ST. MARY'S HOSTEL FOR WOMEN

Rolleston and Mrs. Lewis Shore, the Secretary. They have once more provided large stores of blankets, linen and other necessities for the use of the Hospitals. Needless to say, Matron and the Committee are extremely grateful for this great help.

The Matron's Welfare Fund continues to render invaluable assistance. This Fund has no rules save those imposed by common-sense, and no limitations except its income, and its flexibility is of the greatest value in helping patients and settlers in sudden and unforeseen difficulties which arise from time to time.

Papworth has indeed been greatly blessed, but the demands for admission continue to exceed the available accommodation. The increasing numbers in the village settlement must soon compel expenditure on the water supply, for the present one is overtaxed. Workshops, hospitals and village have all extended during the year; but much remains to be done and without the continued generosity of the public the Committee's work cannot be adequately carried on.

The Committee cannot conclude this Report without again expressing

their deepest gratitude to all subscribers, donors and other helpers, and to the Press for their invaluable assistance. It is their pleasure once more to record their indebtedness to the Medical Director, the Matron, to Dr. Stott and to the whole of the medical, nursing and administrative staffs, also to Mr. Tallyn, the new General Manager of the Industries, and to Mr. Reynell Wreford, the Organising Secretary. Last, but not least, to the workers in the Industries, upon whom, in the end, the credit and success of Papworth depends. To all of them, the Committee are grateful for good work well and cheerfully done.

ELIZABETH GORDON,
Hon. Sec.



THE MAKING SHOP: CABINET-MAKING DEPT .

REPORT OF THE MEDICAL DIRECTOR FOR THE YEAR 1932



It seems but yesterday that our migration, with thirty-five patients, from Bourn to Papworth took place. It will be remembered that in 1918 we had outgrown the accommodation at Bourn and had to seek new quarters sufficiently large for expansion.

Since that time we have been busily engaged in extending our activities in every direction and the year which has just closed has been no exception to the rule. It was in 1923, to make the scheme more complete, that we admitted women patients to Papworth. Almost immediately the accommodation we provided at Homeleigh was taxed to its uttermost, and it became necessary to make plans for future development. These plans came to fruition this year when our new hospital for women—called the Princess Hospital—by gracious permission of H.R.H. The Duchess of York, after the two little Princesses, Elizabeth and Margaret was opened. This hospital was designed and built by Pap-

worth Industries, that is to say by the industrial section of Papworth, which employs the patients and ex-patients in the Village.

The hospital has met with widespread approval, both for its design and its construction. It certainly fills a long felt want and meets our needs admirably. While the number of beds is much greater than we had at Homeleigh, yet this number does not seem entirely to meet the pressing requests for admission.

During these hard and difficult times we are doing our best (through the generosity of our donors) to provide additional accommodation for all those who seek our help. During the year we reached our record number of occupied beds, namely 390, and it is our endeavour as far as possible to avoid a waiting list. To this end we are at the present time engaged in building a large new hospital for male patients. This, according to our custom, has been



THE NEW ASSEMBLY SHOP : CARPENTRY DEPT.

designed by Papworth Industries and is being constructed by and under their management. This will further increase our number of beds—so urgently needed—and we hope that the benefits Papworth is so well fitted to provide will reach a still wider field.

INDUSTRIAL PROGRESS

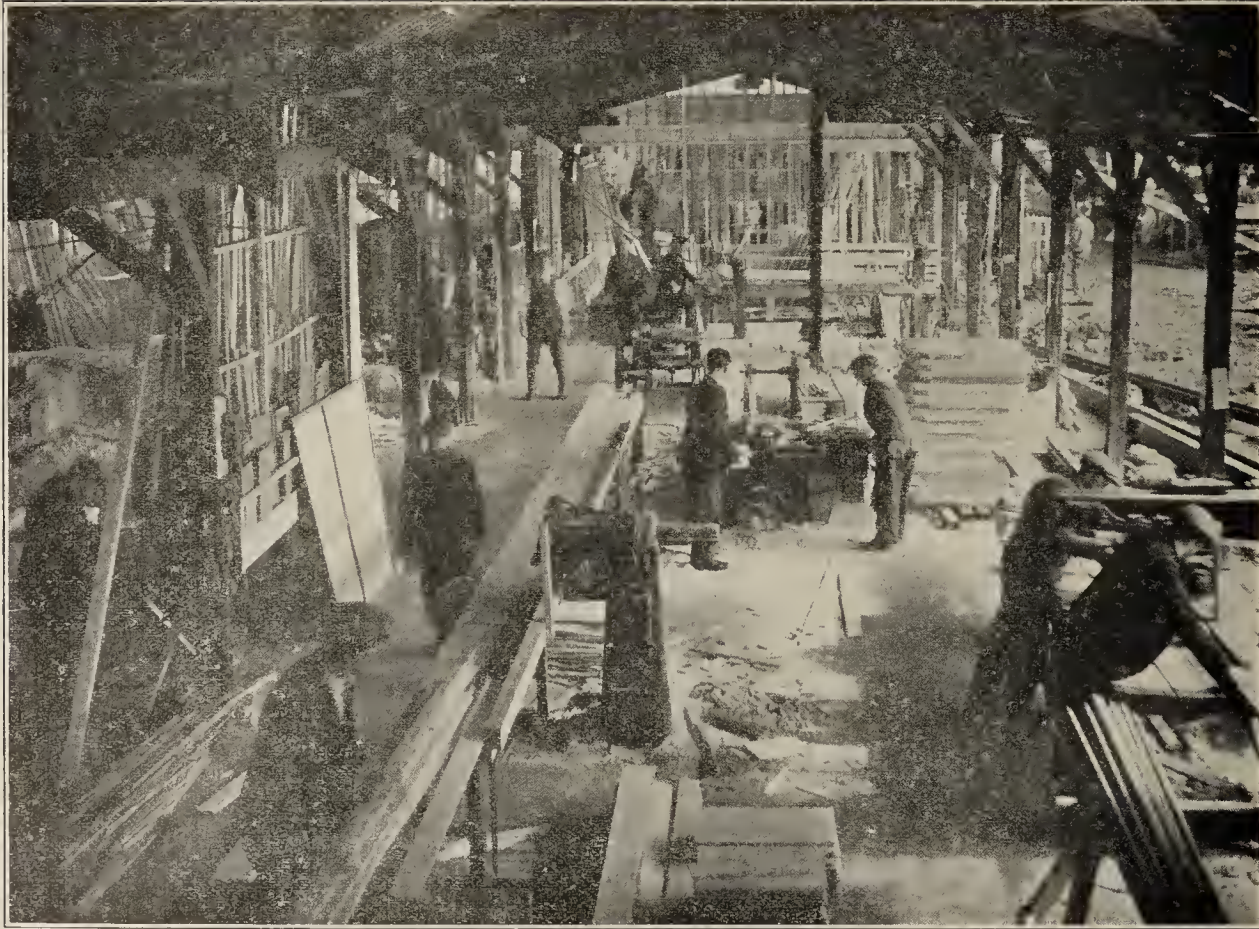
While all this activity is proceeding on what we may call the purely medical side of our undertaking similar proceedings are taking place on the industrial side and in the village. Thanks again to our kind donors we have been able to extend the carpenters' shop; two large additions have already been erected and a third is well on the way to completion. It may seem strange that we should venture to extend this side of our activities when the trade of the country is in such dire straits, and while we have felt the economic hurricane as have all other businesses, we have much to be thankful for. The modern stress and strain of competition does not pass us by and while the manufacturing concerns of the outside world have had to reorganise themselves and adapt themselves to more modern conditions, we have had to alter our view point and trim our sails

to battle against the storm. That we have so far succeeded is shewn by the fact that our sales to the outside world have increased by £1,200 during the year under review. Our internal work—that of new buildings—has been a little less, owing to the fact that one of our own hospital buildings was constructed during the preceding year. This is a very satisfactory state of affairs and it is due to the realisation by the management of Papworth Industries that new methods of construction and of marketing have to be sought in order to compete with manufacturing concerns which have similarly altered theirs.

PRINCIPLES UNCHANGED

The principles, however, underlying our work remain the same—the provision of employment for substandard workers, so organised that full play is given to their initiative while physical and mental exertion is adjusted to their physical and mental capacity.

I have elsewhere stressed the desirability of providing purposeful work to those afflicted with tuberculosis. Purposeless work kills all initiative; it not only does this but it leaves the sufferer a physical and moral wreck. All schemes of occupational therapy



THE MACHINE SHOP : CARPENTRY DEPT.

unless conducted along these lines will prove to be another will o' the wisp, much like the now exploded myth, the light job in the open air. Both lead nowhere. The hard economic times through which the country, nay the world, is passing serves to remind us of the struggle expressed in the survival of the fittest. The unfit are pushed to the wall, and unless there is a rescue party at hand the end is disaster. The struggle for existence still exists even in a sheltered community, for without that stimulus moral and physical decay sets in. The success or otherwise of the substandard community depends upon the balance which is struck between this struggle for existence and the forces which produce that struggle. It is a fine balance which must be maintained, and it is the balancing of those various factors which make up an environment which is the secret of the success of all work which is called after-care. In the outside world it is well nigh impossible to maintain that balance, as witness the very small number of persons permanently benefited by the measures adopted by After-Care Committees, compared with the numbers waiting for help. The reason is not far to seek.

The factors are so numerous and so various, are not confined to the patient himself but involve his whole family, that it is extremely difficult to co-ordinate them all. It is sufficiently difficult in a village settlement where most of the factors—not all—are under one control. That the Industries during these difficult times have been able to extend their activities speaks volumes for what the substandard man and woman can accomplish when given a chance. The unemployment problem in the world at large is beginning to make people think. They will learn valuable lessons, all of which can be applied to the far greater problem of the employment of the unfit or substandard man and woman.

QUESTIONS OF RESISTANCE

We are studying the question of infection in tuberculosis and from the earliest days our attention has been directed to this aspect of the problem. Hence we have been interested in observing how the children of our colonists fare as time goes on. I append the report by Dr. Stott who is in charge of this section of the work as to what he finds at the present day. That various of our



THE UPHOLSTERY DEPT.

children have met the tubercle bacillus there is no doubt. When and to what extent will clinical disease manifest itself is the vital question. We have long held the view that the avoidance of the massive dose is the ideal to be attained, but we have nowhere been able to define what a massive dose means. We maintain that a large number of tubercle bacilli taken into the body will produce clinical disease but the probability is that what is a large dose for one individual is a small one for another. On what does this depend? We realise that we are simply restating the old problem of the soil versus the seed, but we are doing more than this; we are groping to find out the mechanism of resistance. What does the soil consist of? What are the ingredients which make up the powers of resistance? In other words, what is the mechanism of adaptation of the human organism to the stresses and strains of existence, including the resistance to infection? Work along these lines has been proceeding at Papworth for some years. We have accumulated various data, we believe them to be facts but the time has come when further efforts along these lines must be made. We have an ideal field

for such an investigation, but it will take time, there are so many unknown factors to be determined. That one patient puts up a splendid resistance to the advance of the disease while another quickly goes under with it is an observation of everyday experience. Is this due solely to the size of the initial doses of bacilli ingested or inhaled, or does it depend upon the unknown factors of resistance? That in a nutshell is the problem which should be tackled both here and in other institutions. We hope to make our contribution to the solution of this problem.

CONTRADICTORY CRITICISMS

It is curious how criticisms of the village settlement idea veer round from one point of the compass to another. From the old complaint that men and women would not stay in a village settlement comes the criticism that they stay too long! There can be no "stay too long" in the case of those persons with permanently damaged tissues—in those who from time to time have exacerbation of the disease and who consequently at such times cough up immense quantities of bacilli. Village Settlements are designed for such cases; those very people who are



SHELTERS FOR NON-PULMONARY MALE PATIENTS

such a problem in the outside world and indeed are the problem of the ordinary sanatorium.

Those whose sputum was once and once only positive when in the Army and in whom the bacilli have never more been demonstrated are to my mind in an entirely different category and those persons should not be classified with those for whom the village settlement is intended. To all intents and purposes they are fit persons and are certainly no danger to the community. There should be no place for them in a village settlement. But for the non-arrested tuberculous there is no more ideal place for treatment and after-care than the village settlement and no more ideal place for the family, remembering always that the family is the unit to be dealt with and that we waste time and money unless our work centres round this unit.

Capital alone is needed to expand the village settlement indefinitely. Many years ago I was asked what size a village settlement should be; I could not answer that question then and I cannot answer it now. There is doubtless an economic limit which it would be wise not to exceed, but when we consider that the

country has passed through the worst financial and industrial crisis in its history and that the village settlement has continued to expand, one wonders what would have happened in more normal times. We have recently seen in the medical press adverse criticisms by well-known authorities on the sanatorium system. They are just criticisms, and they are just because the nature of the tuberculosis problem has not been grasped. The middle case which is the case *par excellence* with which the village settlement deals is unsuitable for the sanatorium which presupposes the existence of the early curable case. Yet, two-thirds of the beds of sanatoriums are filled with these unsuitable cases. Why, then, does the anomaly exist? Simply because we are afraid to tackle the problem at its roots. The village settlement attempts to do this and we may be pardoned in stating that its success demonstrates not only the feasibility of the idea, but also its practicability. The enormous amount of knowledge which is acquired by the observation of the whole life of the consumptive and his family will undoubtedly lead to wisdom, and when we have sufficiently absorbed that



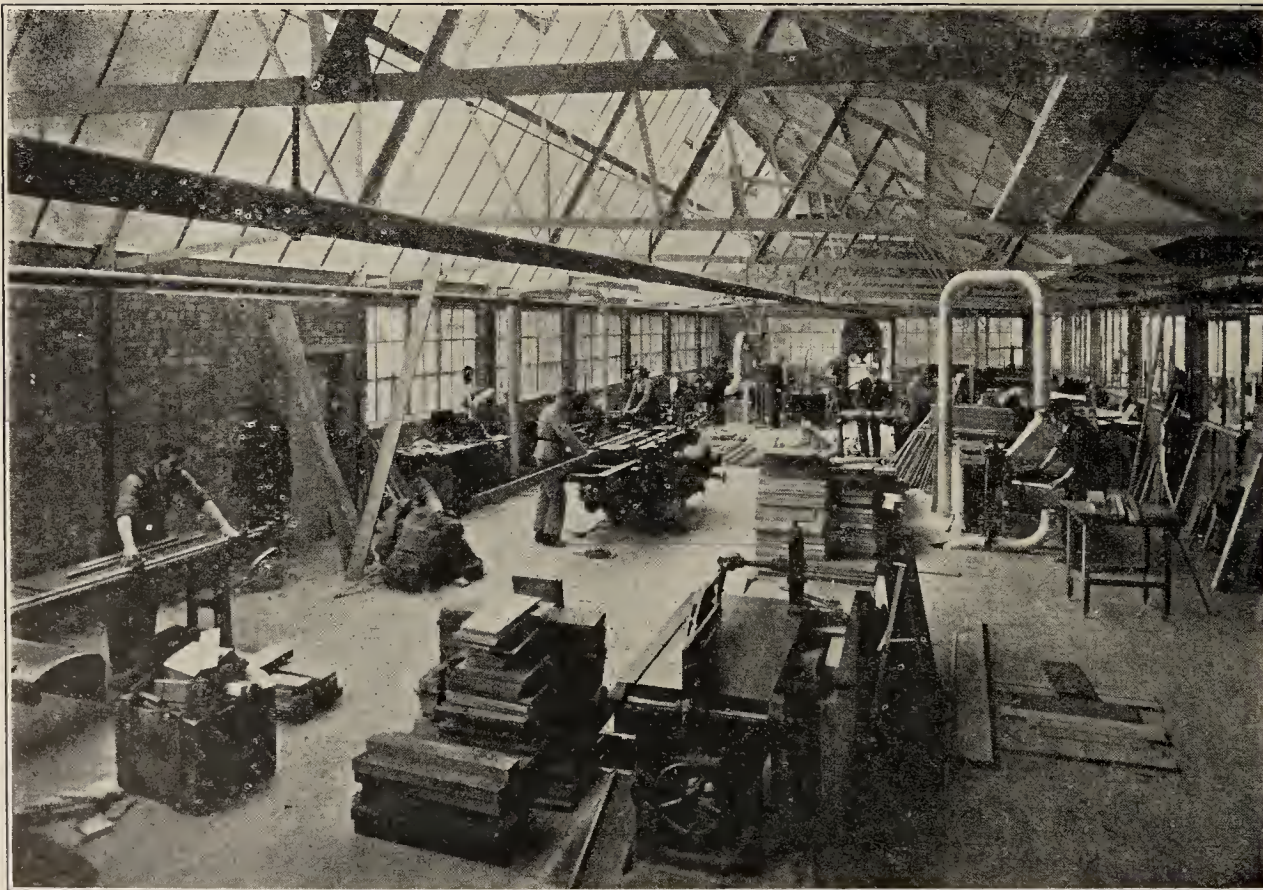
THE LEATHER TRAVELLING GOODS DEPARTMENT

wisdom we may be able to lay down the lines of medical, social and psychological work which will be of immense benefit in fighting the tuberculosis scourge in the world at large.

INFECTION AND DISEASE

One thing I may notice picked out at random from many. Infection with the tubercle bacillus and clinical disease are two very different things. They are still too often confused as they have been in the past. When does infection take place—and where? When does this infection become evident as clinical disease? Our work in connection with the children of the village will provide in time an answer to the question. That the children born in our village are so far free from clinical disease due to the tubercle bacillus may only mean that so far they are not old enough to develop signs and symptoms. Time alone can prove or disprove this. Infected children who have arrived at a later age with their parents, and who have had sanatorium treatment before they arrived at Papworth have shown clinical signs and will serve as interesting comparisons with the children born here. That they all mightily improve

under these conditions there is no doubt. They live in home sanatoriums and if our medical theories are right we should expect them not only to improve but to maintain that improvement. The standard of education in the home is an important factor. The educability of the parents is of supreme importance. Their ability to make use of the facilities provided is of paramount urgency and what is most noteworthy is that one of the facilities is that illusive non-material factor—public opinion. Sir George Newman lays stress on the “way of life” to be led by those who wish to retain their health. If the community accepts as a matter of course a way of life which leads to health, even the dullest member of that community can hardly fail to follow so universal an example. So many of our visitors admire our material contrivances for such a way of health hardly realising that the spirit behind these practical factors is the all-important thing. A mental adjustment is needed, and it is the striving for this mental adjustment which is the corner stone of our work. I would stress this point to the uttermost; it is one of the secrets for the solving of the tuberculosis problem.



THE MACHINE SHOP : CABINET-MAKING DEPARTMENT

MEDICAL WORK

Dr. Stott contributes the following report:

"The medical work of the year has continued in eight units as mentioned in my last report, all of which have been successfully operated. These units are:—

- Collapse Therapy Unit.
- Ultra-Violet Light Unit.
- Refraction Unit.
- Ear, Nose and Throat Unit.
- Psychological Unit.
- Children's Clinic.
- Dental Clinic.
- Laboratory.

The Collapse Therapy Unit during the latter part of the year has had the benefit of a new type of pneumothorax machine which it was felt fulfilled certain requirements not met by the usual type of machine. This was constructed in the Laboratory by Mr. L. Feaver, and three models are now in use. This apparatus does away with the necessity of waiting for the bottles to be refilled when exhausted, as the functions of the two bottles are reversed and refilling is entirely automatic. Details of this will be found in later pages.

The Ultra-Violet Light Unit gave 717 exposures in all, operating three times weekly. The equipment consists of a large "Arnold" and a portable "Hanovia" mercury vapour lamp, and during the year Dr. Barron Cruickshank kindly placed at our disposal a filter which passes ultra-violet rays and excludes visible light. This has been of great value as an aid to diagnosis.

The Ophthalmological Unit continued as in previous years, meeting on Sunday morning for refraction work, with daily attendances during surgery hours for treatment. Owing to the existence of separate panels of ophthalmic surgeons and opticians for the various bodies arranging ophthalmic benefit under the National Health Insurance Act, it had not been possible to organise this unit on the lines of the Dental Clinic. We are indebted to Dr. E. H. Ezard for considerable help in difficult cases.

Mr. A. S. H. Walford has been most kind in seeing patients from our *Ear, Nose and Throat Unit*. The number of patients requiring the attention of this unit does not grow less and there were two admissions to Addenbrooke's Hospital from Papworth for operative treatment during 1932.



THE CHILDREN'S BATHING POOL

Dr. H. Bannister has again been most assiduous in his attendances at the *Psychological Clinic*, held once a week, and his help has been most valuable.

The Children's Clinic.—During 1932 the work of the Clinic was uninterrupted by any serious epidemic, there being no more than two notifications of infectious disease during the year. One, a case of lobar pneumonia in a boy of 16, and one a case of pulmonary tuberculosis in a girl of 11 who colonised with her parents during the year.

The commencement of each school term was heralded by the usual crops of febrile colds, and this transmission of infection during school hours formed the subject of an investigation of the seating accommodation of infected children. Dr. Glover, of the Ministry of Health, visited the village and kindly arranged for us to use special forms for the collection of statistical data. He was also very helpful in advising as to notation and the maintenance of records.

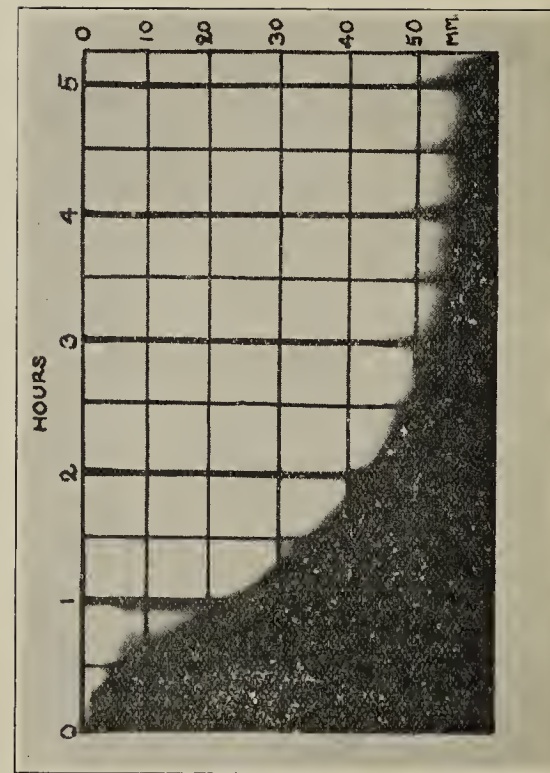
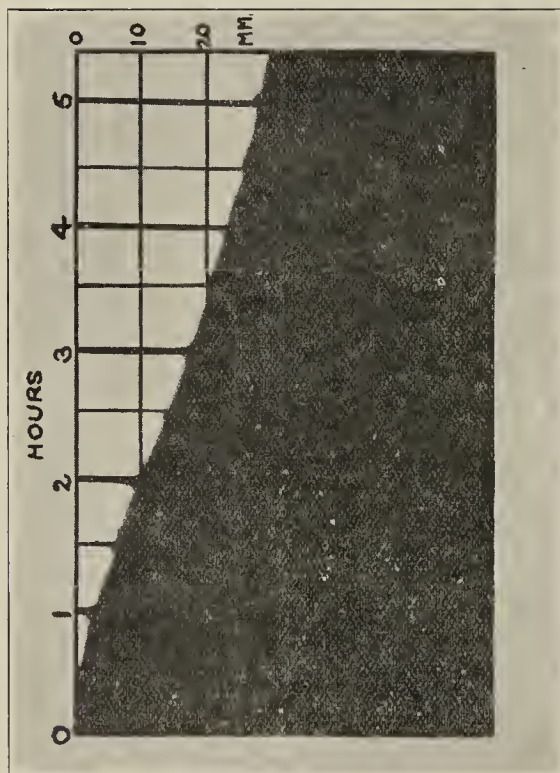
Twelve children were born in the village during 1932, and as in former years their mothers had all been members of our ante-natal clinic. The attendances for re-examination at the children's clinic, which is held twice

weekly, totalled 1543, and during the summer there were 477 attendances during 27 sessions in the swimming pool, the average attendance being equal to that of the previous year, but the number of days when swimming was possible being considerably less.

The Dental Clinic.—Considerable progress was made during the year with the dental inspection and treatment of members of the Settlement, and the attendances reached the figure of 988, an increase of 118 over 1931. The adoption of nerve-block anæsthesia for extractions and fillings has helped considerably to raise the prestige of the clinic and encourage the nervous patient to undergo treatment.

The Laboratory.—The work of the laboratory included as usual, its two main sections (1) X-rays and photography, and (2) pathology. In addition to this, the supervision of the Ultra-Violet Light Unit was undertaken by this department.

X-Rays. During the year 301 films were taken and 1044 screen examinations made. As in former years the department benefits from the very active interest and frequent visits of Dr. A. E. Barclay. Each year there has been an increasing demand on the



PHOTOGRAPHIC RECORDS OF BLOOD SEDIMENTATION RATE

Laboratory dark-room for the purpose of industrial photography, *i.e.*, photographs required for the Sales Department of the Industries, and this work has developed from what was originally an occasional demand for a special photograph into a steady amount of work.

Pathology. Routine examinations of sputum numbered 1771, and urine, 836. This department also carried on an investigation into the physics of the blood sedimentation reaction, and constructed an apparatus for making a photographic record of the blood sedimentation rate." (*see illustrations*)

* * *

PNEUMOTHORAX MACHINE

It is of interest to place on record a detailed account of the pneumothorax apparatus designed by Dr. Stott and used by him and his assistants in this Institution.

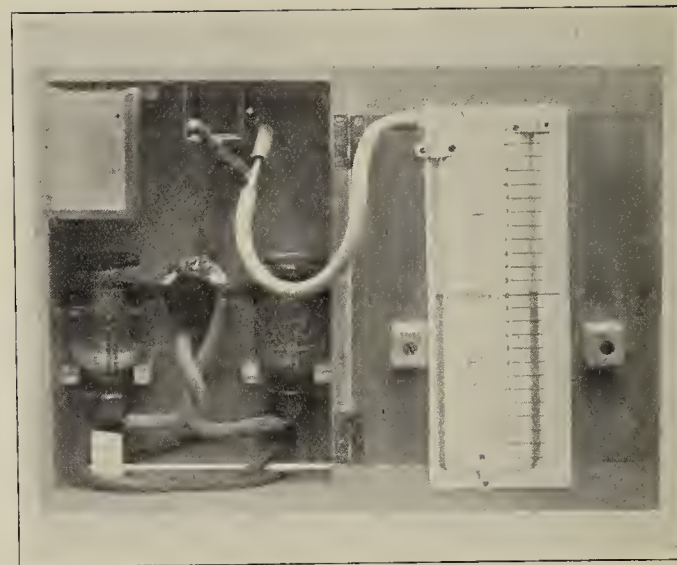
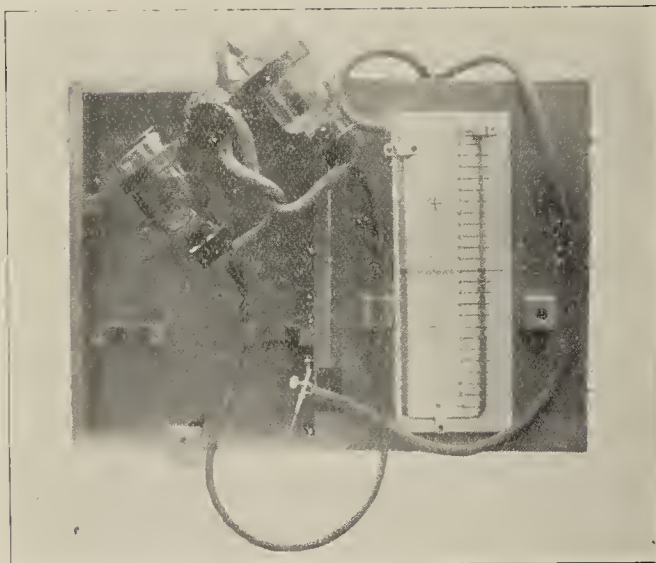
The most widely used artificial pneumothorax apparatus, consisting of two bottles containing water and connected by a syphon, has the disadvantage that considerable time is wasted in refilling the apparatus when its capacity is exhausted. No advantage is obtained by increasing its size,

as although the refilling processes are thus made less frequent, they are made correspondingly more lengthy. To obviate this, an apparatus has been designed in which the functions of the two bottles can be reversed so that no refilling is necessary.

The higher bottle has an air *inlet*, and the lower has an air *outlet* to the manometer and delivery tube. When all the water has run from the upper to the lower bottle, their positions are reversed as well as the air connections. This is done by employing a compound tap, consisting of two flat discs revolving on a horizontal axis, on the moving part of which a frame is attached supporting the bottles. These bottles are inverted, and there is a natural flow of water from one to the other through a loop of rubber tubing, instead of a syphon. The air tubes reach to the air space above the water, and are drawn off to a point, so that, when the apparatus is not in use, splashing of the water will not cause it to run into them. The volume of water is such that 100 c.c. of air is inserted at a time in each direction. It will also be seen that in any intermediate position, the apparatus is shut off from the patient and the manometer, and pressure readings can thus be taken.

BELOW—

Apparatus assembled for use with needle connected.



ABOVE—

Pneumothorax apparatus before assembly. The box measures only 12 in. x 8 in. x 4 in.

THE PNEUMOTHORAX APPARATUS

The tap, though simple to construct, is found to be extremely efficient. The moving part is a flat circular disc of brass, having two holes drilled diagonally opposite each other, and short brass tubes soldered into them. The fixed part of the tap has four holes drilled in the form of a square, each diagonal pair corresponding with the holes in the moving plate. A brass tube is soldered on the back making connection with two adjacent holes, and a brass box is soldered over the other two loosely packed with cotton wool.

The apparatus packs neatly into a box when not in use, the manometer being, as usual, on the door. When required for use, the apparatus is taken from the box and suspended by inserting the filter box into a brass tube at the top. The photographs show the two positions. It will be noticed that the volume markings are not parallel to the base of the bottles. This is not accidental, but designed to assist the memory. The tap has four positions marked; one for air insertion, and one for pressure reading in *each direction*. This is because if a pressure reading were taken when there was water in both bottles, some confusion might otherwise arise as to the direction in

which the water was flowing. Similarly, if a refill ends with a fraction of 100 c.c., confusion as to which bottle gives the reading is removed if one is lower than the other. Hence the marks are given along the water level in the correct position.

It will be seen that the apparatus has many advantages:—

- (1) Time-saving.
- (2) Space-saving.
- (3) Simplicity of operation; only one control and no clips.
- (4) Fool-proof. It is impossible to make any technical error which will cause harm to the patient. There is no syphon, therefore it is impossible for an accident to occur due to lack of attention; when the water has run through it remains at rest. The apparatus can be made to stand any desired pressure by lengthening the rubber tube between the bottles. A loop of 30 cm. depth is considered suitable. The danger due to the possibility of dropping parts of the apparatus is also removed.
- (5) The air is inserted reasonably quickly at a very low pressure.
- (6) The whole apparatus can be placed in a sterilizer. The apparatus will not refill a patient to high positive pressure, but this is rarely required.

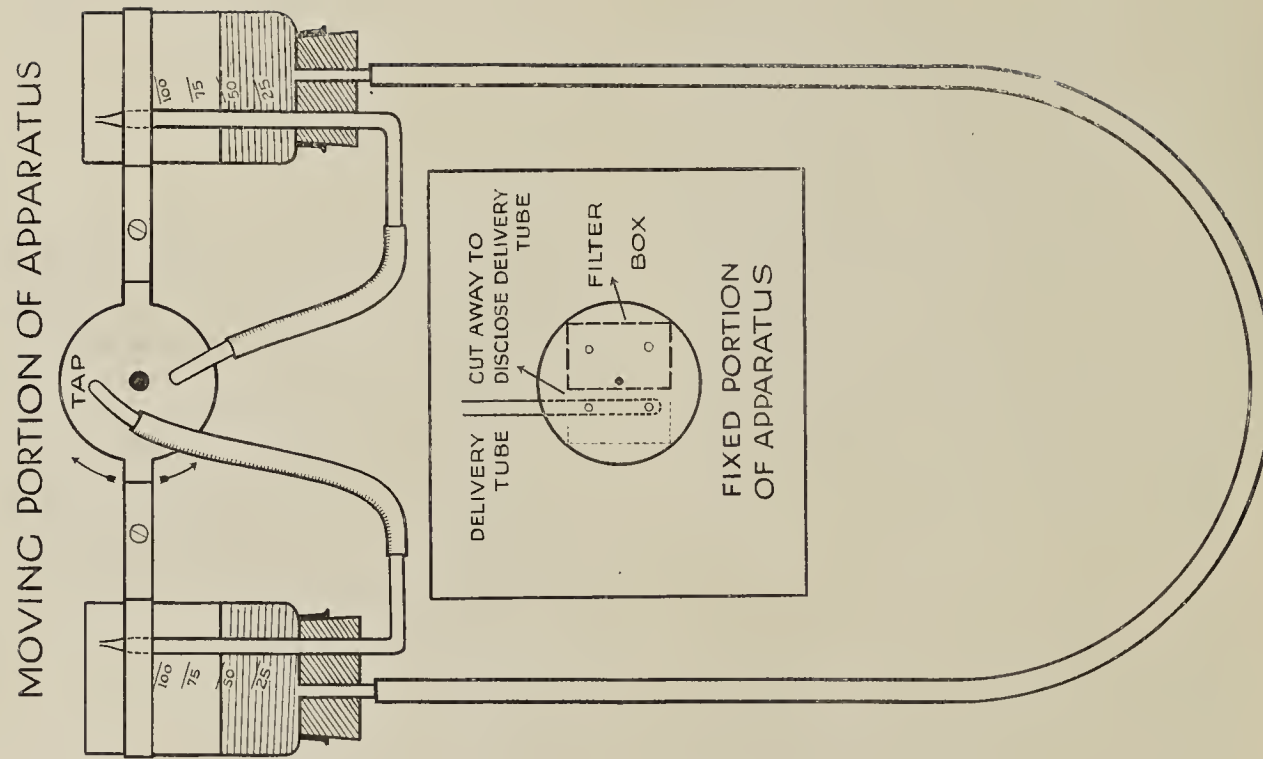


DIAGRAM OF THE PNEUMOTHORAX APPARATUS

THE SOCIAL LIFE.

The social life at Papworth grows more complex year by year. We have now reached the stage where the inhabitants of the Settlement have begun to discriminate between the various social events and entertainments, so varied are they, according to their own particular tastes. All the clubs and societies are flourishing—the Horticultural Society being particularly favoured by the presence of Their Royal Highnesses the Duke and Duchess of York at the Annual Show and Exhibition during the summer. The Boy Scouts had a most successful camp in Lincolnshire, and during the autumn a new society was founded, the “Papworth Players” who, at the end of the year, were very busy in the production of a pantomime.

There is a saying that it takes all sorts to make a world, and this is very true of a Village Settlement. At Papworth we have men and women from all parts of the country, men and women of all callings, brain workers as well as manual workers. I stress this point because it is sometimes thought that patients who are unfit physically for manual labour, or whose talents are best used in administration work,

cannot enter Papworth and that no opportunities lie therein for such.

Once again I close my report by expressing my thanks to all those in the outside world who have gone to considerable trouble to arrange entertainments, both dramatic and musical, at Papworth and to the many kind friends who have helped in an extraordinary number of ways.

To the Matron, Miss Borne, and of Dr. Stott, I take the opportunity to expressing my thanks for the unfailing help they have given, and for their unremitting attention to the needs of the Settlement. To the nursing staff for their duty well done during a most arduous year, and to the medical and administrative staffs, I offer my thanks. To the Manager and the employees of the Industries I must offer my congratulations for the way in which they have fought the tide of depression so successfully.

Lastly, I desire to express my grateful thanks to the Honorary Staff and to the Committee whose help has been so valuable, and becomes increasingly so as the Settlement grows. With their support I am sure the future may be faced with confidence.

PENDRILL C. VARRIER-JONES.



THE SOUTH END OF THE VILLAGE

The Matron acknowledges with Grateful Thanks Gifts for Patients
received during 1932 from the following:—

Their Majesties the King and Queen.

The Abbey Girl's Club, Cambridge.
Mrs. Adey, Cambridge.
Anonymous.
Anonymous.
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Mrs. Webb, Papworth Everard.
Mrs. Webber, Shepreth.
Mrs. Wolstencroft, Cambridge.



THE VILLAGE HALL

